US 20140115588A1

(19) United States

(12) Patent Application Publication

(10) Pub. No.: US 2014/0115588 A1

(43) Pub. Date: Apr. 24, 2014

Traut et al.

(54) SYSTEMS AND METHODS FOR EXPOSING PROCESSOR TOPOLOGY FOR VIRTUAL MACHINES

(71) Applicant: **Microsoft Corporation**, Redmond, WA (US)

(72) Inventors: **Eric P. Traut**, Bellevue, WA (US); **Rene Antonio Vega**, Kirkland, WA (US)

(73) Assignee: **Microsoft Corporation**, Redmond, WA (US)

(21) Appl. No.: **14/144,528**

(22) Filed: **Dec. 30, 2013**

Related U.S. Application Data

(63) Continuation of application No. 11/018,337, filed on Dec. 21, 2004, now Pat. No. 8,621,458.

Publication Classification

(51) **Int. Cl.**
G06F 9/44 (2006.01)

(52) **U.S. Cl.**
CPC *G06F 9/4406* (2013.01)
USPC **718/1**

(57) **ABSTRACT**

The present invention is directed to making a guest operating system aware of the topology of the subset of host resources currently assigned to it. At virtual machine boot time a Static Resource Affinity Table (SRAT) will be used by the virtualizer to group guest physical memory and guest virtual processors into virtual nodes. Thereafter, in one embodiment, the host physical memory behind a virtual node can be changed by the virtualizer as necessary, and the virtualizer will provide physical processors appropriate for the virtual processors in that node.